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ABSTRACT

This study compared the final grades of 118 traditional classroom learners and 81 distance learners to determine whether there was a significant difference in their grade point averages. The study involved the final grades from five graduate courses in Human Resource Development at Indiana State University. Each participating class was taught by the same professor, and each student received the same information. Distance learners used video tapes, the Internet, and the Indiana Higher Education Telecommunication System network. Students' letter grades were collected and converted to numbers on a 4.0 scale. The numerical grade points for each semester were entered into an SPSS Windows computer application using a two-way Anova test. Data analysis indicated that there were no significant differences between the final grade point averages of the distance learners and the traditional classroom learners. (Contains 12 references.) (SM)

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A COMPARISON OF FINAL GRADES OF DISTANCE LEARNERS TO CLASSROOM LEARNERS

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Abstract

This study compared the final grades of 118 traditional classroom learners final grades of 81 distance learners to ascertain if there is a significant difference in grade point average. The study was conducted at the graduate level on subjects with Human Resource Development majors. Each of the classes according to class number were taught by the same professor. Each student was presented with the same information. A two-way Anova test was conducted to evaluate the difference between the final grades.

Background of the Problem

As the 21st century arrives, solidly grounded foundations of distance education are required for a role as a provider of education in the years to come. Educational provision at the end of the 1990's is enriched by the availability of conventional, distance, and virtual systems (Keegan, 1996).

Recent developments in network and communication technologies offer geographically and physically separated individual access to courses and instruction in a timely and more interactive manner through increased communication, interactivity among participants, and incorporation of collaborative models. Distance education via these technologies has unique characteristics (speed, interactivity, multiple locations, and a variety of communication techniques), so that for the first time we can provide experiences that allow teacher and learner to interact over distance in almost traditional ways (Schrum, 1999).

Enormous opportunities are arising for educators with world wide networks and the declining costs of computer equipment. Previously, students had to go to university libraries to access resources, but computer networks have made these resources available on line. Students in remote locations are now able to take university classes through the internet.

International planners and government agencies will be faced with crucial decisions concerning the cost of education in the new millennium. Many questions will be asked concerning investment of the taxpayer's money and what is the most cost-effective mode of delivering education. Do they build and maintain buildings to which

students travel for face-to-face group-based conventional education, or do they choose to fund distance education or invest citizen's monies in the development of virtual educational provision (Keegan, 1996)?

With the large number of distance learners growing rapidly, some observers hold the idea that this number may become larger than the number of students in the classroom. If there is a significant difference between the needs of the distance learner and the classroom learner, then the instructor must adjust their teaching approach accordingly. Adjusting the educational approach means more than changing the delivery method of education; it implies a different emphasis and a different manner of presenting the material (Yellen, 1997-98).

The Department of Independent Study and Distance Education at the University of Florida at Gainesville had 4,965 registrations and 2,728 completions in 1993/94. 55% of the students completed their courses. They stated that there is usually a less than 2% failure rate in independent study courses. The content of each course was essentially the same as the course taught on campus. No grade point averages were given (Keegan, 1996).

Harry, Magnus, and Keegan (1993) stated that distance education is an extraordinary way of teaching and learning, and that it has two distinct characteristics:

- Because of the apartness of teacher and learner, certain emotional dimensions and overtones are cut off.
- The student has an advantage of being able to study alongside of work.

Simmons (1993) conducted a study of distance learners using the IHETS (Indiana Higher Education Telecommunication System). His research surveyed 152 Indiana State

University students taking classes on the IHETS system. 92.7% of the Simmons 1993 respondents indicated that the IHETS delivery system is a viable alternative to traditional field based classes. 83.5% of the students believe that the advantages of taking IHETS classes far outweigh the disadvantages. 87.5% believe the IHETS delivery system works well for them. The data in this study supports a conclusion that IHETS courses provide learning experiences equal to traditional classes.

In the United States there are more than 5 million people enrolled in distance learning of some type and an additional 250,000 people are enrolled in independent study; in 1995, there were at least 60,000 receive sites for satellite teleconferencing (Keegan, 1996). With such a large population of distance learners, it is essential that educators evaluate and compare the quality of education between classroom learners and distance learners. Ortner, Groff, and Wilmersdoerfer (1992) wrote that the quest for quality in distance education entails:

- Being clear about the educational goals of each course and about the kind of learning expected of students.
- Using educational methods, environments, and assessments which match the specified educational goals, paying particular attention to the differences between knowledge, skills, and understanding in the cognitive domain and motivation in the affective domain.
- Making provision for the different learning styles and approaches to learning to be found in normal cohorts of students.
- Ensuring that both students and staff understand the educational goals.

In a summary of research on learning outcomes and attitudes for students in higher education, Moore and Thompson (1997) reviewed comparisons of distance learning instructional technology (two-way audio and video and teleconferencing vs. traditional face-to-face teaching). Studies that compare cognitive factors such as amount of learning, academic performance, achievement, and assignment of grades in distance learning and campus courses were summarized. In general, the outcomes of that body of research reflected no differences in cognitive factors between the distance and traditional classes. Means, standard deviations, and obtained t statistics for distance education and on-campus course evaluations were presented with no differences in overall ratings (Spooner, Jordan, Algozzine, & Spooner, 1999).

Willis tells us that numerous studies have been conducted to explore the comparative effectiveness of distance and traditionally delivered instruction (Eiserman & Williams, 1987). The majority of studies concluded that distance delivered instruction could be as effective as traditional instruction if the delivery methods were selected based on:

1. Background and experience level of the student.
2. Cognitive style of the learner.
3. Diversity of students participating in the course.
4. Appropriateness of the content being delivered (Willis, 1993).

According to Jamie Merisotas, president of the Institute For Higher Learning, many of the studies suggest the grades of distance learners are higher or comparable to traditional learners. However, we do not know if the poorer performers are dropping out at a higher rate (McQueen, 1999).

In the majority of research in which instructional factors were studied, opportunities for interaction between students and instruction seemed to be negatively affected in the distance condition (Davis, 1984; Purong & Lather, 1990); in Weingard (1984) however, they were not affected. In contrast, Jaegar (1995) found that collaboration and interdependence among students and support for independent learning activities were positively affected by distance education(Spooner, Jordan, Algozzine, & Spooner, 1999).

If distance education is of the same quality, quantity, and content as classroom education, then there should be no significant difference between the final grades of distance learners and classroom learners.

Statement of the Problem

The general question behind this investigations was, "What is the grade difference between distance learners and classroom learners in the Human Resource Development curriculum at the graduate level?".

More specifically, the reason for this study was to investigate the problem, "Is there any difference in the final grade of Human Resource Development courses between distance learners and classroom learners?".

The hypothesis investigated in this study was: There will be no significant difference in the final grade of distance learners and classroom learners in the Human Resource Development curriculum at the graduate level.

Methodology

The information studied involved the final grades of five graduate courses in Human Resource Development at Indiana State University in Terre Haute, Indiana.

There were 199 students in the study with 118 of them classroom learners and 81 of them distance learners. The distance learners used the delivery methods of video tapes, internet, and the IHETS network.

Terre Haute is a city of 63,000, but the area surrounding it, called the Wabash Valley, has a population of 253,000. Principal areas of employment are large and small industries, farming, business, and the professions. Indiana State University has a student population of 11,000. It is accredited by the North Central Association of Colleges and offers bachelor's and master's degrees, the educational specialist degree, and doctoral degrees.

The final grades were gathered for 199 students in five graduate HRD courses for the semesters of Fall 1997, Spring 1998, and Fall 1998. Considering all known variables, no differences were noted about the subjects as a group. However, 118 of them were classroom learners and 81 of them were distance learners. Individual differences were assumed to be normally distributed.

The letter grades were converted to numbers on a 4.0 scale. The numerical grade points for each semester were entered into an SPSS windows computer application using a two-way Anova test. Group I represented classroom learners and Group II represented distance learners. A mean grade point was given for Group I and Group II for each semester; a mean grade point was given for the three semesters of Group I and Group II; a mean grade point was given for each semester of the two groups combined; a mean grade point was given for all semesters combined and the two groups combined. An analysis of the difference between the means was also given.

Results

There was no significant difference between the grade points of the distance learners and the classroom learners in the two groups. The results of the two-way Anova test of statistical data are as follows:

Table I

Group	Semester 1	Semester 2	Semester 3	Total
Classroom Learners	3.85	3.84	3.84	3.84
Distance Learners	3.90	3.91	3.83	3.88
Combined Mean	3.87	3.87	3.83	3.86

Table I shows the mean scores of the classroom learners and the distance learners for each semester, a total mean score for each group, a combined mean score, and a total combined mean score.

Table II

Analysis of Difference Between Means			
	DF	F	Sig of F
Group	1	.392	.532
Semester	2	.234	.791
Interaction	2	.187	.829

Table II shows the analysis of difference between the group means, semester means, and the interaction of means.

Graph I (p. 12) demonstrates the mean grade of each group for the three semesters. Graph II (p. 13) demonstrates the mean grade of groups one and two for the three semesters clustered together.

Discussion, Conclusions, and Recommendations

This study investigated the comparison of final grades of distance learners to classroom learners of graduate students in the Human Resource Development curriculum. After performing a two-way Anova test on the grade points of the two groups, it was found that in semesters one and two, the mean grade point of the distance learners was slightly higher. However, in semester three, the mean grade point of classroom learners was slightly higher. When looking at the total mean grade point for three semesters, the distance learners mean was slightly higher.

It is important to note, however, that the analysis of difference between the means demonstrates that there is no significant difference between the final grades of distance learners when compared to classroom learners.

Electronic information systems and the IHETS network have greatly expanded the capabilities of universities to deliver education. Distance learning is flexible for both the students and the educators, and allows an institution to deliver education to more people and through many different avenues.

As demonstrated in this research, the data on distance learning is favorable. However, institutions of higher learning should continue to monitor the methods of teaching, quality of the curriculum content, and the final grades of distance learners when compared with classroom learners.

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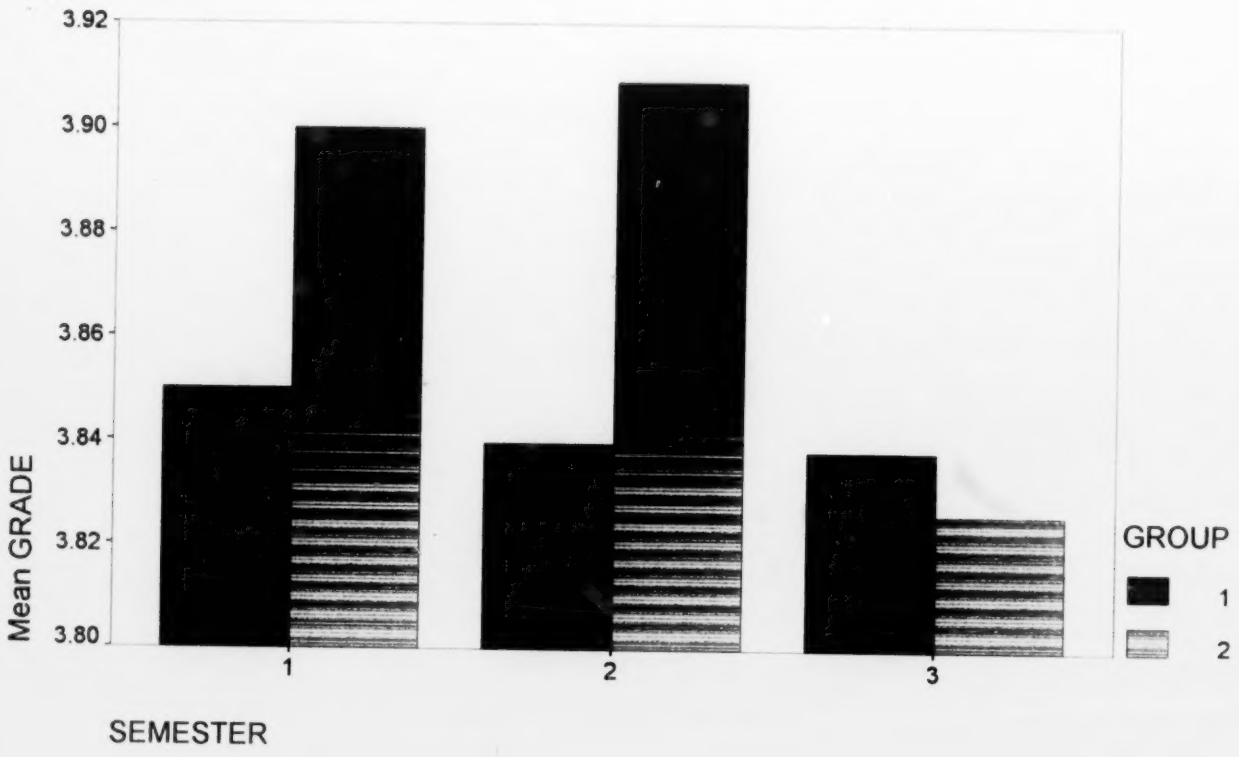
3.92
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Mean GRADE
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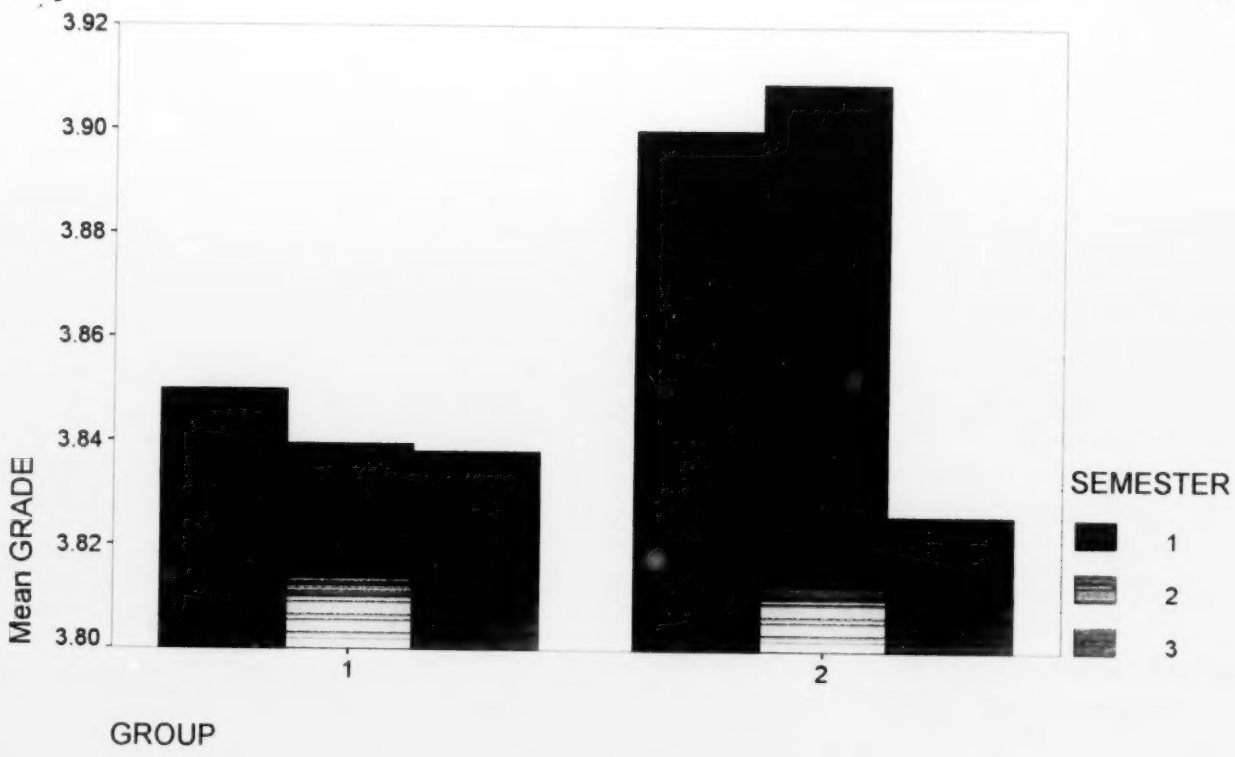
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